

**Claim Amendments**

Please amend the claims as follows:

**Claims:**

1. (Currently Amended) A non-electrolytic energy production system for dissociating H<sub>2</sub>O molecules at or near a reactive or catalytic surface, the system having comprising:  
~~two reactors, the a first and a second reactor being of a primary reaction system that includes the steps of each having H<sub>2</sub>O as a feed material, and in which~~  
~~selecting an electronegative half cell reaction producing hydrogen;~~  
~~selecting a first electropositive half cell reaction having a sufficient potential to drive said electronegative half cell reaction; and~~  
~~selecting a second electropositive half cell reaction all occur;~~  
~~wherein said first and second electropositive half cell reactions are selected in combination with said electronegative half cell reaction to produce hydrogen and/or energy production from water the feed material; and~~  
~~combining said half cell reactions, and~~  
~~the second reactor including the step of introducing wherein H<sub>2</sub>O in the form of steam produced as a by-product of in the first reactor is introduced at elevated temperature and a positive pressure as the feed material into the second reactor as the sole energy input, wherein to provide the necessary activation energy added to the second reactor by the addition of the steam is used by the reaction systems in the second reactor as activation energy.~~
2. (Cancelled)
3. (Cancelled)
4. (Currently Amended) An energy production system according to claim 1 wherein the reaction system reactor or half cell reactions require or are assisted by the provision of a reactive or catalytic surface.
5. (Currently Amended) An energy production system according to claim 1 wherein the reaction system includes on one or more electropositive half cell reactions involving the oxidation of species selected from Group I or Group II metals, binary hydrides, ternary hydrides, amphoteric elements, electropositive elements in groups one and two of the periodic table and chelated transition elements, oxyacids of phosphorus and oxyacids of sulfur.

6. (Currently Amended) An energy production system according to claim 1, wherein the ~~reaction system includes~~ reactors include one or more electropositive half cell reactions involving a metal organic complex capable of changing configuration to release one or more electrons in a realisation of an increased co-ordination number.

7. (Currently Amended) An energy production system according to claim 1, wherein the ~~reaction system includes the formation of~~ reactors form a further semi-conductive material or molecule.

8. (Previously Presented) An energy production system according to claim 5, wherein the semiconductive material or molecule is a composite material or molecule.

9. (Previously Presented) An energy production system according to claim 1, further including an associated heat exchange system that can be used to transfer heat from an exothermic chemical reaction in the cell or control the rate of exothermic chemical reaction(s).

10. (Cancelled)

11. (Currently Amended) An energy production system according to claim 1, wherein the ~~step of introducing steam at elevated temperature and a positive pressure is the sole energy input into the reactor; wherein a portion of the energy added to the second reactor system by the addition of the steam is used by reaction systems in the second reactor to dissociate H<sub>2</sub>O molecules at or near a reactive or catalytic surface through Brownian motion.~~